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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/528,357 | 03/18/2000 | Kui-Chiu Kwok | 8010-61 | 4073 |
| 7590 | 03/19/2004 | | EXAMINER | |
| Mr Donald J Breh Illinois Tool Works Inc 3600 West Lake Avenue Glenview, IL 60025-5811 | | | DEL SOLE, JOSEPH S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1722 | |

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/528,357

Applicant(s)

KWOK ET AL

Examiner

Joseph S. Del Sole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003 and 14 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 48-50 and 67-83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 48-50 and 67-83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/11/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 12/11/03 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 6,074,597 or US Patent 5,902,940 has been reviewed and is NOT accepted.
2. An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c). While Mr. Bowler II has been corresponding in this application, he has not been given the power of attorney either in the original declaration or in a subsequent declaration.
3. It should be noted that applicant is not required to pay another disclaimer fee as set forth in 37 CFR 1.20(d) when submitting a replacement or supplemental terminal disclaimer.

Claim Objections

4. Claims 50 and 72 are objected to because of the following informalities: **a)** claim 50 lacks the necessary period, "." at the end of the claim and therefore "thereof" should be changed to --thereof.--; **b)** "the plurality first" at line 4 of claim 72 should be changed to --the plurality of first-- in order to be grammatically correct; and **c)** "the plurality first" at line 4 of claim 75 should be changed to --the plurality of first-- in order to be grammatically correct. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 48-50 and 68-69 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 48 is directed to both an apparatus ("body member" and "plurality of ... orifices") and a product ("plurality of filaments each having a predominant vacillation amplitude..."). Claim 68 is directed to both an apparatus ("orifices" and "body member" of parent claim 67) and a product ("filament having a major vacillation..."). Claim 69 is directed to both an apparatus ("orifices" and "body member" of parent claim 67) and a product ("filament having a minor vacillation..."). Therefore, each of these claims are directed to neither a "product" or an "apparatus" and rather embrace two different statutory classes of invention set forth in 35USC101. However, 35USC101 is drafted so as to set forth the statutory classes of invention in the alternative only, which these claims do not accomplish. See MPEP 2173.05(p) for guidance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 48-50 and 68-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of these claims, as discussed above, discuss both an apparatus and a product and are therefore ambiguous, vague and indefinite. See MPEP 2173.05(p) for

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guidance. Because the preamble of the claims cite a system, the claims have been examined with regard only to apparatus limitations.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 73, 77 and 79 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,074,597. Although the conflicting claims are not identical, they are not patentably distinct from each other because the exactly two second fluid orifices of claim 1 of 6,074,597 includes a plurality of second fluid orifices; because two second fluid orifices flanking the first fluid orifice of claim 1 of 6,074,597 includes the second fluid orifices disposed symmetrically on not more than two substantially opposite sides of the first fluid orifice, at least one second fluid orifice on one side of the first fluid orifice and at least one second fluid orifice on the other substantially opposite side thereof; because the exactly two second fluid orifices and the first fluid orifice have respective corresponding conduits disposed non-convergently in the body member of claim 1 of

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6,074,597 encompass the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member; and because its obvious that portions of the body member proximate each first fluid orifice devoid of second fluid orifices, the portions of the body member devoid of second fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the second fluid orifices, because if these areas were not devoid of orifices, there would only be a single orifice not multiple orifices.

10. Claims 77 and 79 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3, 4 and 6 of U.S. Patent No. 6,074,597. Although the conflicting claims are not identical, they are not patentably distinct from each other because the exactly two second fluid orifices of claim 3 along with at least one additional second fluid orifice of claim 6 of 6,074,597 includes a plurality of second fluid orifices; because two second fluid orifices flanking the first fluid orifice of claim 3 of 6,074,597 includes the second fluid orifices disposed symmetrically on not more than two substantially opposite sides of the first fluid orifice, at least one second fluid orifice on one side of the first fluid orifice and at least one second fluid orifice on the other substantially opposite side thereof; and because the exactly two second fluid orifices and the first fluid orifice have respective corresponding conduits disposed non-convergently in the body member of claim 4 of 6,074,597 includes the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member.

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11. Claims 73, 75-77, 79 and 81-82 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 8 of U.S. Patent No. 6,074,597. Although the conflicting claims are not identical, they are not patentably distinct from each other because each first fluid orifice flanked on substantially opposing sides by exactly two separate second fluid orifices of claim 8 of 6,074,597 includes the second fluid orifices disposed symmetrically on not more than two substantially opposite sides of the first fluid orifice, at least one second fluid orifice on one side of the first fluid orifice and at least one second fluid orifice on the other substantially opposite side thereof; because the plurality of first fluid orifices and the plurality of second fluid orifices formed by respective corresponding fluid conduits disposed non-convergently in the body member of claim 8 of 6,074,597 includes the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member; and because it is obvious that portions of the body member proximate each first fluid orifice devoid of second fluid orifices, the portions of the body member devoid of second fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the second fluid orifices, because if these areas were not devoid of orifices, there would only be a single orifice not multiple orifices.

12. Claims 77 and 80 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 52-54 of U.S. Patent No. 6,074,597. Although the conflicting claims are not identical, they are not patentably distinct from each other because a first fluid orifice in a die assembly including at least two parallel plates of claim 52 includes a first fluid orifice in a body

member and the body member comprises at least two plates; because two second fluid orifices in the die assembly associated with the first fluid orifice of claim 52 of 6,074,597 includes a plurality of second fluid orifices in the body member; because one of the second fluid orifices disposed on one side of the first fluid orifice and another of the second fluid orifices is disposed on another substantially opposite side of the first fluid orifice of claim 53 of 6,074,597 includes the second fluid orifices disposed symmetrically on not more than two substantially opposite sides of the first fluid orifice, at least one second fluid orifice on one side of the first fluid orifice and at least one second fluid orifice on the other substantially opposite side thereof; and because the first and second fluid orifices each having a corresponding fluid conduit formed in the die assembly, the fluid conduits of the first and second fluid orifices are arranged non-convergently of claim 54 of 6,074,597 includes the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member.

13. Claims 73, 75-77, 79 and 81-82 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16 and 20 of U.S. Patent No. 5,902,540. Although the conflicting claims are not identical, they are not patentably distinct from each other because a plurality of first orifices in a body member of claim 16 of 5,902,540 includes a first fluid orifice in a body member; because a plurality of second orifices in the body member of claim 16 of 5,902,540 includes two second fluid orifices in the body member; because the plurality of first orifices is flanked on substantially opposing sides by one of the plurality of second orifices of claim 16 of 5,902,540 includes the two second fluid orifices disposed symmetrically on not more

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than two substantially opposite sides of the first fluid orifice and includes the second fluid orifices disposed symmetrically on not more than two substantially opposite sides of the first fluid orifice, at least one second fluid orifice on one side of the first fluid orifice and at least one second fluid orifice on the other substantially opposite side thereof; because a first means for substantially uniformly distributing first fluid supplied to the plurality of first orifices and a second means for substantially uniformly distributing second fluid supplied to the plurality of second orifices of claim 20 of 5,902,540 includes the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member; and because its obvious that portions of the body member proximate each first fluid orifice devoid of second fluid orifices, the portions of the body member devoid of second fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the second fluid orifices, because if these areas were not devoid of orifices, there would only be a single orifice not multiple orifices.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 48-50 and 67-83 are rejected under 35 U.S.C. 102(b) as being anticipated by Dodge, II et al (5,160,746).

Dodge, II teaches a melt blowing system having

claims 48-50:

a body member having a plurality of first fluid orifices (Fig 3, #43), the body member having a plurality of second fluid orifices (Fig 3, #45), each first fluid orifice flanked on substantially opposing sides by two separate second fluid orifices, the plurality of first fluid orifices and the plurality of second fluid orifices formed by respective corresponding fluid conduits disposed non-convergently in the body member; the plurality of first fluid orifices protruding relative to the plurality of second fluid orifices (Fig 2); two portions of the body member proximate each first fluid orifice devoid of fluid orifices, the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the corresponding first fluid orifice between the two second fluid orifices on substantially opposite sides thereof (Fig 3);

claims 67-67:

a first fluid orifice in a body member (Fig 2, #43); two second fluid orifices in the body member, the two second fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice (Fig 3); the first and second fluid orifices each having a corresponding fluid conduit disposed in the body member; two portions of the body member proximate the first fluid orifice devoid of fluid orifices (Fig 3), the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the two second fluid orifices (Fig 3); the first and second fluid orifices disposed on a fluid dispensing face of the body member (Fig 3); a plurality of first fluid orifices in the body member (Fig 3) and a plurality of second fluid orifices in the body member; the plurality of first and second fluid orifices each having a corresponding fluid conduit disposed in the body member (Fig 2);

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each first fluid orifice having two second fluid orifices disposed symmetrically on substantially opposite sides thereof (Fig 3); two portions of the body member proximate each first fluid orifice devoid of fluid orifices, the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the corresponding first fluid orifice between the two second fluid orifices on substantially opposite sides thereof (Fig 3);

claims 73-76:

a first fluid orifice in a body member (Fig 2, #43); two second fluid orifices in the body member, the two second fluid orifices disposed symmetrically on not more than two substantially opposite sides of the first fluid orifice (Fig 3); the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member (Fig 2); two portions of the body member proximate the first fluid orifice devoid of fluid orifices, the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the two second fluid orifices (Fig 3); a plurality of first fluid orifices in the body member and a plurality of second fluid orifices in the body member (Fig 3); the plurality of first and second fluid orifices each have a corresponding fluid conduit disposed in the body member (Fig 2); each first fluid orifices having two second fluid orifices disposed symmetrically on not more than two substantially opposite sides thereof (Fig 3); two portions of the body member proximate each first fluid orifice devoid of fluid orifices (Fig 3), the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the

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corresponding first fluid orifice between the two second fluid orifices on substantially opposite sides thereof (Fig 3);

claims 77-82:

a first fluid orifice in a body member (Fig 2, #43); a plurality of second fluid orifices in the body member (Fig 2, #45); the second fluid orifices disposed symmetrically on not more than two substantially opposite sides of the first fluid orifice, at least one second fluid orifice on one side of the first fluid orifice and at least one second fluid orifice on the other substantially opposite side thereof (Fig 3); the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member (Fig 2); portions of the body member proximate the first fluid orifice devoid of fluid orifices, the portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the second fluid orifices (Fig 3); the first fluid orifice protrudes relative to the second fluid orifices (Fig 2); the body member comprises at least two plates (Figs 2 and 3); a plurality of first fluid orifices in the body member (Fig 3); each of the plurality of first fluid orifices having second fluid orifices disposed symmetrically on not more than two substantially opposite sides thereof, at least one second fluid orifice on one side of each first fluid orifice and at least one second fluid orifice on the other substantially opposite side thereof (Fig 3); portions of the body proximate each first fluid orifice devoid of second fluid orifices, the portions of the body member devoid of second fluid orifices, the portions of the body member devoid of second fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the second fluid orifices (Fig 3);

and claim 83:

a first fluid orifice in a body member (Fig 2, #43); a plurality of at least two second fluid orifices in the body member (Fig 2, #45), the second fluid orifices disposed on substantially opposite sides of the first fluid orifice (Fig 3); the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member (Fig 2); and portions of the body member proximate the first fluid orifice devoid of fluid orifices, the portions of the body member devoid of fluid orifices disposed on substantially opposite sides of the first fluid orifice between the second fluid orifices (Fig 3).

The limitations "a plurality of filaments, each filament emanating from a corresponding one of the plurality of first fluid orifices, the plurality of filaments each having a predominant vacillation amplitude between the two second fluid orifices on substantially opposing sides of the corresponding first fluid orifice", "in combination therewith a filament emanating from the first fluid orifice, the filament having a major vacillation amplitude between the two second fluid orifices on substantially opposite sides of the first fluid orifice", and "the filament having a minor vacillation amplitude between the portions of the body member devoid of fluid orifices" are product and method limitations that do not further limit the apparatus claims.

16. Claims 67-71 and 83 are rejected under 35 U.S.C. 102(b) as being anticipated by Boger et al (5,169,071).

Boger et al teach a melt blowing apparatus (Fig 4, #100) having a first fluid orifice in a body member (Fig 4, #76); a plurality of at least two second fluid orifices in the body member (Fig 4, #90), the two second fluid orifices disposed symmetrically on

substantially opposite sides of the first fluid orifice (Fig 4); the first and second fluid orifices each have a corresponding fluid conduit disposed in the body member (Fig 4); two portions of the body member proximate the first fluid orifice devoid of fluid orifices (Fig 4, the space between the first and second orifices), the two portions of the body member devoid of fluid orifices disposed symmetrically on substantially opposite sides of the first fluid orifice between the two second fluid orifices; a filament (Fig 4, #98) emanating from the first fluid orifice, the filament having a major vacillation amplitude between the two second fluid orifices on substantially opposite sides of the first fluid orifice; the filament having a minor vacillation amplitude between the portions of the body member devoid of fluid orifices; the first and second fluid orifices disposed on a fluid dispensing face of the body member (Fig 4); and the first fluid orifice protrudes relative to the second fluid orifices (Fig 4).

Response to Arguments

17. Applicant's arguments filed 12/11/03 and 1/14/04 have been fully considered but they are not persuasive with regard to the Boger reference or the double patenting rejections. However, new additional grounds of rejection have been made.

The Applicant argues that the obviousness-type double patenting rejections have been overcome due to the terminal disclaimer.

The Examiner disagrees. As stated above, the terminal disclaimer has not been accepted.

The Applicant argues that independent claims 67 and 83 are not taught by Boger because Boger teaches air orifices arranged asymmetrically about the central fluid orifice.

The Examiner disagrees. While Boger does teach more than two orifices, some of which are not symmetrical to others, the claimed inventions do not preclude the presence of more than two orifices. The two second orifices as shown in Figure 4 encompass the two second orifices claimed in claims 67 and 83.

The Applicant argues that Boger fails to disclose the limitations of claims 68 and 69 involving the vacillation quality of the emanating filament.

While this may be true, the point is moot. Claims 68 and 69 are combination claims not recognized by 35USC01 and are thus rejected. However, because the preamble of the claims cite a system, the claims have been examined with regard only to apparatus limitations.

The Applicant's argument's with regard to the rejections drawn to Keller and Miller are persuasive and the rejections have been overcome.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Joseph Saad Sale 3/10/04

J.S.D.

March 10, 2004